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RESEARCH ARTICLE

Sociodemographic Profile and Habits of Elderly Patients Attending Family Medicine Offices in Central Istria, Croatia

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ABSTRACT

Objective: To describe the sociodemographic profile and investigate the habits of elderly patients attending family medicine offices in central Istria, Croatia.
Patients and Methods: This was a retrospective study, conducted in central Istria. Data were obtained by a physical examination, extraction from a recorded history of disease, and using an administered questionnaire. The patients were stratified into three groups: young (65-74 years), middle (75-84 years), and older old age (>85 years). Groups were compared about education, marital status, body mass index, frequency of visits to a family doctor, and habitual activities such as physical activity, smoking, coffee and alcohol consumption, and vitamins/dietary supplements intake, and hobbies.
Results: Overall, 191 patients were included, of which 93 young (49%), 82 middle (43%), and 16 older old (8%). The age groups differed statistically with regard to education and marital status. In the young old group, 53% of subjects had a high school/university diploma, in the middle old 19%, and in the oldest old 12% ($p<0.001$). The proportion of widowed subjects in the young, middle, and oldest old groups were 16%, 40%, and 50%, respectively ($p=0.005$). The most common diagnoses were cardiovascular diseases (76-83%), diabetes (41-56%), vision and hearing problems (13-31%), and musculoskeletal disorders (6-29%). The majority of responders were not physically active (59.2%) and had a body mass index ≥ 25 kg/m2 (50-77%).
Conclusion: Understanding the profile of elderly patients is paramount in order to preserve the dignity of living by meeting their health, social, and economic needs.
Key Words: Alcohol consumption, body mass index, comorbidity, elderly, physical activity, smoking

INTRODUCTION

Aging is a process during which numerous physical and psychological changes occur. It is important to distinguish healthy from pathological aging, as well as to emphasize that disease and age are not synonyms. Population aging is accelerating rapidly: there were 461 million people aged over 65 in 2004 and it is estimated that the number will rise to approximately two billion by 2050, which has profound implications for planning and delivery of health and social care [1,2]. According to the World Health Organization (WHO), by 2020 the number of people aged 60 years and older will have outnumbered children younger than five years.

In 2011, 17.7% of the Croatian population consisted of people aged 65 and above, i.e. every sixth citizen was in this age group. In Europe, Croatia is among countries with the highest percentage of people aged 65 and above. It is estimated that by 2050 more than 30% of the Croatian population will be aged 65 and above [3]. In developed countries, 75% of all deaths occur in people aged 65 and above. Due to both the high incidence of disease in advanced age, as well as ever rising proportion of elderly citizens, geriatrics was formed, as a specialty focused on specific health related demands of this group of patients [4].

Aging is associated with progressive functional weakening of bodily organ systems, which can

affect absorption, transport, metabolism, and secretion of nutrients. Loss of taste, smell, impaired vision, and loss of functional status are common in elderly people and may cause reduced food intake as a result of poor appetite, poor food recognition, and inability to self-feed [5].

Numerous studies show diversity in the habits of older people regarding health-related behavior. Namely, aging processes are to some extent affected by hereditary traits, quality of life, various risk factors, and diseases. Hence, aging and its functional consequences affect each person individually. Age is also often associated with negative health-related behaviors, such as physical and mental inactivity, obesity, alcoholism, smoking, excessive coffee intake, lack of personal and environmental hygiene, disregard for professional health recommendations, and uncontrolled intake of prescribed drugs.

Older people are not a homogenous group and do not perceive themselves as a separate population group but are an integral part of the community in which they actively engage, live and create. Active, healthy aging involves adapting to new circumstances, knowledge, and continuous learning and detection of the benefits of aging [6]. The development of medicine and technology, quality health care and many other factors have led to a prolongation of the human lifespan and this trend is to continue. Moreover, chronological prolongation of life means that more and more people need assistance in their old age, whether to meet their primary needs, or to contribute actively to their own wellbeing, their family, or the wider local community [6].

The aim was to describe the profile and examine health-related habits of elderly patients visiting general practice (GP) offices in Central Istria, by gathering their sociodemographic data, interviewing them on their daily habits and activities, and retrieving data from their medical records.

PATIENTS AND METHODS

Patients

The subjects were randomly selected patients aged 65 and older, who were registered in three general GP offices in central Istria. Patients were stratified according to age into three groups: 1) 65-74 years – young old; 2) 75-84 years – middle old; 3) 85 years and older – oldest old. Data were collected in three ways: 1) by a physical examination to obtain anthropometric data; 2) from a medical archive to identify chronic conditions; and 3) by a questionnaire to investigate daily activities and health-related behavior. Diseases were categorized as follows: 1) mental illnesses and addiction; 2) diabetes; 3) allergies and mild respiratory diseases; 4) asthma/chronic obstructive pulmonary disease (COPD); 5) hypo/hyperthyroidism; 6) cardiovascular diseases; 7) musculoskeletal disorders; 8) neurological diseases; 9) kidney and prostate diseases; 10) gastrointestinal diseases; 11) malignant diseases; 12) anemia and blood diseases; 13) dermatological diseases; and 14) visual and auditory system impairments. The data were collected between August and October 2016.

Statistical analysis

Categorical variables were summarized as absolute (relative) frequencies and continuous variables as mean plus/minus standard deviation. Proportions were compared using chi-square test and means using ANOVA. Level of significance was set at 0.05. All analyses were carried out using SPSS version 17.0 for Windows (SPSS, Inc, Chicago, IL).

Ethical approval

This study was conducted in accordance with guidelines for human studies determined by the Ethical Committee of the Zagreb University School of Medicine and was approved by the Ethical Committee of the Istrian Health Center Medical (Pula, 17th October 2014, approval no. 4378/2014.).

RESULTS

Overall, there were 191 subjects included in the survey, of which 100 (52%) men and 91 (48%) women. Average age was 74.7±6.9 years, and the number of patients per age groups was: 93 (49%) young old, 82 (43%) middle old, and 16 (8%) oldest old. The proportion of men/women was not significantly different between the groups. Average BMI was 27.9±4.0 kg/m^2, and there were no significant differences in BMI across groups.

The proportion of smokers was 7.9%, with no significant differences across groups. The proportion of patients who pursued hobbies and leisure activities in the past year was 47.6%, with the lowest proportion in the oldest old group (37.5%); however, the difference was not statistically significant. There was a statistically significant difference in the educational status between groups: younger age groups had a higher proportion of subjects who had finished primary/secondary school, as opposed to the oldest old groups, which had a high proportion of patients (50.0%) who did not finish primary school ($p<0.001$). Also, there was a statistically significant difference between groups regarding the marital status: with age, the proportion of widowed patients increased, and the proportion of married patients decreased ($p=0.005$). There were no statistically significant differences between groups regarding alcohol and caffeine consumption, dietary supplements/vitamins intake, exercise or visits to a GP (Table 1).

In the youngest old group, cardiovascular diseases (n=71), musculoskeletal disorders (n=38), diabetes (n=27), vision and hearing disorders (n=19), and neurological diseases (n=12) were most commonly reported. In the middle old group, cardiovascular diseases (n=68), musculoskeletal disorders (n=46), diabetes (n=17), vision and hearing disorders (n=12), and neurological diseases (n=11) were the most common reported disorders. In the oldest old group, cardiovascular diseases (n=13), musculoskeletal disorders (n=7), neurological diseases (n=5), vision and hearing disorders (n=4), and diabetes (n=1) were the most common reported disorders (Table 2).

Table 1. Demographic, anthropometric, and data on health-related behavior

variable		Overall (n=191)	65-74 years (*n*=93)	75-84 years (*n*=82)	>85 years (*n*=16)	*p*
Sex (Female)		91 (47.6)	38 (40.9)	45 (54.9)	8 (50)	0.176
Age (Years)		74.7±6.9	68.9±3.2	78.7±3.1	87.9±3.0	<0.001*
BMI (Kg/M²)		27.9±4.0	27.9±3.8	28.1±4.0	26.4±4.4	0.260
Smoking (Yes)		15 (7.9)	10 (10.8)	4 (4.9)	1 (6.3)	0.343
Hobbies (Yes)		91 (47.6)	50 (53.8)	35 (42.7)	6 (37.5)	0.239
Education	primary school not finished	31 (16.2)	6 (6.5)	17 (20.7)	8 (50.0)	<0.001*
	primary school	93 (48.7)	38 (40.9)	49 (59.8)	6 (37.5)	
	secondary school	44 (23.0)	29 (31.2)	14 (17.1)	1 (6.3)	
	university degree	23 (12.0)	20 (21.5)	2 (2.4)	1 (6.3)	
Marital Status	single	13 (6.8)	5 (5.4)	7 (8.5)	1 (6.3)	0.005*
	married	121 (63.4)	72 (77.4)	42 (51.2)	7 (43.8)	
	divorced	1 (0.5)	1 (1.1)	0 (0)	0 (0)	
	widowed	56 (9.3)	15 (16.1)	33 (40.2)	8 (50)	
Alcohol Consumption	daily	52 (27.2)	28 (30.1)	22 (26.8)	2 (12.5)	0.215
	3-5 times weekly	13 (6.8)	8 (8.6)	4 (4.9)	1 (6.3)	
	1-2 times weekly	18 (9.4)	13 (14.0)	4 (4.9)	1 (6.3)	
	1-2 time monthly	15 (7.9)	8 (8.6)	6 (7.3)	1 (6.3)	
	never	93 (48.7)	36 (38.7)	46 (56.1)	11 (68.8)	
Caffeine Consumption	daily	47 (24.6)	18 (19.4)	27 (32.9)	2 (12.5)	0.217
	3-5 times weekly	18 (9.4)	8 (8.6)	9 (11.0)	1 (6.3)	
	1-2 times weekly	10 (5.2)	4 (4.3)	5 (6.1)	1 (6.3)	
	1-2 time monthly	18 (9.4)	13 (14.0)	4 (4.9)	1 (6.3)	
	never	98 (51.3)	50 (53.8)	37 (45.1)	11 (68.8)	
Dietary Supplements/ Vitamins Intake	daily	28 (14.7)	14 (15.1)	13 (15.9)	1 (6.3)	0.375
	3-5 times weekly	13 (6.8)	3 (3.2)	9 (11.0)	1 (6.3)	
	1-2 times weekly	14 (7.3)	10 (10.8)	3 (3.7)	1 (6.3)	
	1-2 time monthly	18 (9.4)	10 (10.8)	6 (7.3)	2 (12.5)	
	never	118 (61.8)	56 (60.2)	51 (62.2)	11 (68.8)	
Exercise	daily	31 (16.2)	16 (17.2)	13 (15.9)	2 (12.5)	0.448
	3-5 times weekly	19 (9.9)	11 (11.8)	7 (8.5)	1 (6.3)	
	1-2 times weekly	13 (6.8)	8 (8.6)	4 (4.9)	1 (6.3)	
	1-2 time monthly	15 (7.9)	11 (11.8)	3 (3.7)	1 (6.3)	
	never	113 (59.2)	47 (50.5)	55 (67.1)	11 (68.8)	
General Physician Visits	weekly	1 (0.5)	0 (0)	1 (1.2)	0 (0)	0.863
	1-2 times monthly	76 (39.8)	35 (37.6)	36 (43.9)	5 (31.3)	
	1-2 times per six months	82 (42.9)	42 (45.2)	33 (40.2)	7 (43.8)	
	1-2 times annually	21 (11.0)	11 (11.8)	8 (9.8)	2 (12.5)	
	never	11 (5.8)	5 (5.4)	4 (4.9)	2 (12.5)	

Numbers are mean±SD or absolute (relative) frequencies, compared using ANOVA, or Chi-square tests, respectively; BMI – body mass index; *statistically significant

Table 2. Comorbidities

	65-74 years (*n*=93)	75-84 years (*n*=82)	>85 years (*n*=16)
Cardiovascular Diseases	71	68	13
Musculoskeletal Diseases	27	17	1
Diabetes	38	46	7
Vision and Hearing Disorders	12	11	5
Neurological Diseases	19	12	4
Allergies, Nasal Polyps, Septum Deviation	4	5	0
Asthma/COPD	5	4	1
Hypo/Hyperthyroidism	10	5	0
Mental Diseases	11	9	3
Urogenital Disease	10	9	2
Gastrointestinal Diseases	18	5	2
Malignancies	9	10	2
Hematologic Diseases	4	7	0
No Evidence of Recorded Illness	5	5	0
Dermatologic Diseases	4	6	2

DISCUSSION

This survey was conducted on a sample of 191 respondents, equally represented in terms of gender, and divided into three age groups. There was a statistically significant difference among the respondents in terms of their level of education. In the young old group, the majority of respondents have a university education, while the majority of respondents older than 85 years had not completed elementary school. This finding was expected since the responders in the young old age group were mostly born in better conditions and after the Second World War, so their education was more accessible than in earlier generations.

There was also a statistically significant difference among respondents in terms of marital status. The highest proportion of individuals married or in a relationship was in the young old group, and the highest number of widowed individuals in the oldest old group. This finding was also expected, since the majority of the respondents in this group are those who have lost their life partners during their lifetime.

There were not statistically significant differences in BMI across groups. Namely, 50 to 77% of respondents in all groups have an elevated BMI. Earlier it was reported by other authors that BMI increases with age, and age is a known risk factor for obesity [7-10]. Marengoni et al. have shown that aging is associated with more than 50% increase in risk for multimorbidity [11].

There were no statistically significant differences between the groups with regard to physical activity. Between 25 and 38% of respondents in all age groups were physically active. Physical activity reduces the risk of cardiovascular disease and has beneficial effects in prevention of atherosclerosis, significantly improves physical, mental and cognitive functions, and prevents many chronic diseases [12-14]. According to the WHO, participation in physical activity (PA) may play a key role in healthy aging and thus in promotion of Quality of Life (QoL) [15]. Previous studies have suggested that elderly patients with adequate PA levels live healthier lives and are at lower risk of cardiovascular disease [16-18]. Additionally, PA has positive effects on psychological, physical, and emotional well-being [19-22].

In terms of smoking habits, we found no statistically significant differences between the groups. The proportions of smokers were between 5 and 11% in all age groups of responders. Elevated mortality risk associated with smoking has been reported in middle-aged persons and in individuals of approximately 70 years of age [23-25]. Evidence on the relationship between smoking and mortality in individuals aged 80 and over is scarce and inconclusive. Some studies reported a relationship between increased mortality and smoking in this age group [26, 27]. By contrast, other studies reported no association between smoking and increased mortality in men aged 85 to 90, and a lower mortality risk in men aged 90 and above, compared to non-smokers, suggesting emergence of a survival effect as age increases [24].

With regard to coffee/caffeine consumption, there were no statistically significant differences between the groups. The majority of coffee/caffeine consumers were in the middle old age group, while the responders who do not consume coffee/caffeine are mostly older than 85 years. According to the Dietary Guidelines Advisory Committee (DGAC), three to five cups of coffee a day can be an integral part of healthy eating, based on the finding that coffee reduces the risk of diabetes type 2 and cardiovascular diseases. This refers to approximately 400 mg of caffeine a day, but simultaneously excludes sugar, milk and other supplements to coffee.

In terms of alcohol consumption, there were no statistically significant differences between groups. Alcohol is mostly consumed in young older age group of responders, while the respondents over the age of 85 mostly do not consume it. Although light-to-moderate drinking is considered a protective factor against coronary heart diseases, the evidence shows that the degree of protection is much lower in older people than in middle aged people [28]. Furthermore, a parallel neuroprotective effect has been excluded, demonstrating that modest alcohol consumption is not protective against normal age-related decline in total brain volume, with higher levels of consumption consistently associated with a lower volume [29]. Older people drink for many reasons, including being sociable, to relax, and to cope with loneliness [30]. Often, they continue having the same drinking patterns they had before retirement. On the contrary, because of the so-called sick-quitter effect, elderly subjects who develop adverse medical conditions or physical symptoms tend to reduce their frequency of drinking or abstain from alcohol [31, 32]. Nevertheless, alcohol misuse in the elderly is often underestimated, misdiagnosed and undertreated since screening instruments, diagnostic criteria, and public health initiatives are mainly focused on younger age groups. In addition, the average age of the world's population is increasing at an unprecedented rate [33]. During the Swedish Presidency of the council of the European Union (EU) a report concerning alcohol consumption trends and related harms among elderly EU citizens aged over 60 was commissioned by the EU Ministry of Health and Social Affairs [34]. The main findings about alcohol consumption trends and related harms from the ten EU Member States that contributed to the report (Czech Republic, Finland, Germany, Italy, Latvia, Poland, Slovenia, Spain, Sweden, and The United Kingdom) showed that alcohol use in old age is an under-researched area, even though most elderly Europeans drink alcohol (about 70-80% of men and 50% of women consumed alcohol during the previous year). Alcohol related deaths among elderly Europeans have increased over the past ten years in at least seven of the ten EU Member States surveyed, from 25% in Poland to more than 100% in the UK [33].

When comparing all three age groups in terms of frequency of visits to their GP, there was no statistically significant difference. A study conducted in 2009 to analyze the self-reported use of health services among the older Estonian population showed that 81% of the respondents aged 65-74 had visited a GP or a specialist during the previous 12 months. The probability of visiting a GP was higher for those respondents who had health problems and lived in rural areas [35].

Most commonly diagnosed conditions among elderly responders in central Istria were cardiovascular diseases and disorders of the musculoskeletal system, followed by diabetes, vision and hearing problems, and neurological diseases.

There are several limitations in the present study. First, the number of responders is small in comparison to the number of elderly patients in Istria. Second, numerous studies have been done on elderly patients, but they differ in the definition of age groups. Therefore, the diversity of applied methodologies, as well as the diversity of populations on which research has been conducted makes the findings hard to compare across different surveys.

In conclusion, as life expectancy is expected to further extend, effective preventive and therapeutic procedures are essential to act on risk factors, particularly obesity and diabetes, from the earliest age. The basic motto of global activities of health and social protection of the elderly is their integration into society with the goal of "adding life to years, not years to life". The goal is to maintain the dignity of living while preserving health and social and economic needs of the elderly. It is shared responsibility of the society and the individuals to care for the health of our oldest members.

The role of the general practitioners is fundamental in providing comprehensive health care and knowing their patients, their biopsychosocial environment and meeting their individual needs the best way possible.

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